

Zbornik Instituta za kriminološka
i sociološka istraživanja
2016 / Vol. XXXV / 2 / 7-33
Originalni naučni rad
UDK: 159.923.072
616.89-008.442.6

PERSONALITY AND BEHAVIOURAL CHARACTERISTICS OF DARK AND LIGHT NARCISSISM*

Boban Petrović*

Janko Međedović*

Institute of Criminological and Sociological Research, Belgrade

Narcissism is one of the Dark traits usually associated with amoral and antisocial dispositions. However, in difference to the other Dark traits, some aspects of narcissism are connected with socially acceptable aspects of human behavior. Dark and Light aspects of narcissism were identified by partialling out the variance of narcissism for the variance of psychopathy, Machiavellianism and sadism. Results showed that Dark and Light narcissism differ with respect to relations with HEXACO personality traits (study 1) and antisocial behavior, schizotypy and unrestricted socio-sexuality (study 3). The results of study 1 were replicated on the clusters of individuals differing in Dark and Light narcissism (study 2). Thus, narcissism encompasses two aspects, one associated with immoral dispositions, and the other reflecting a more benign side of human functioning.

KEYWORDS: *narcissism / Dark traits / personality / antisocial behaviour / schizotypy / sociosexuality*

* This paper is a result of research Project Crime in Serbia: phenomenology, risks and the possibilities of social intervention (47011), financed by the Ministry of Education, Science and Technological Development of Republic of Serbia

* E-mail: boban.petrovic@iksi.ac.rs, bobanpetrovi@gmail.com

* E-mail: janko.medjedovic@fmk.edu.rs

1. INTRODUCTION

Narcissism, Machiavellianism, psychopathy and sadism are the traits generally recognized as part of Dark Triad construct (Paulhus & Williams, 2002), or, more recently, the Dark Tetrad (Paulhus, 2014; Chabrol, Melioli, Van Leeuwen, Rodgers, & Goutaudier, 2015). These traits are in the focus of researchers mainly because of their strong associations with immoral and antisocial behaviour (Paulhus, 2014). However, unlike Machiavellianism, psychopathy and sadism, growing number of studies show that narcissism has its specificities and is to some extent different in nature. First, studies indicate that narcissism is not exclusively related to antisocial behaviour (Chabrol, Van Leeuwen, Rodgers & Séjourné, 2009). Second, it was shown that the correlations of narcissism with other dark traits are lower than the inter-correlations between other dark traits (Furnham, Richards, Rangel, & Jones, 2014). Third, factor-analytic studies have also shown that the facets of narcissism constitute a factor independent of general dark factor (Međedović & Petrović, 2015; Pailing, Boon, & Egan, 2014). Fourth, narcissism displays, to a certain extent, different relations with general personality traits than with the other dark traits (Lee & Ashton, 2005; Jonason & McCain, 2012). Finally, narcissism is evaluated as "brighter" than Machiavellianism and psychopathy in lay people's perceptions (Rauthmann & Kolar, 2012). For these reasons, this research is focused on the deeper understanding of the narcissism's characteristics regarding the morally-relevant personality traits and behavior.

1.1. Narcissism

Narcissistic Personality Disorder is one of the six personality disorders recognized by the modern classification of personality disorders (Wright, Pincus, Thomas, Hopwood, Markon, & Krueger, 2013). However, nowadays, researchers show greater interest in its subclinical manifestations (Lee, Ashton, Wiltshire, Bourdage, Visser, & Gallucci, 2013). Narcissism includes such personality traits as grandiosity, the need for admiration, the lack of empathy, a sense of entitlement, self-admiration, dominance and superiority, and is characterized by arrogance, a disposition for exploiting others and seeing them as means for achieving personal goals (Jonason, Webster, Schmitt, Li, & Crysel, 2012).

Narcissism can be linked with various forms of antisocial and amoral behaviours (Jonason et al., 2012). However, some studies have shown that the delinquent behaviour is predicted by psychopathy, sadism and Machiavellianism, but not by narcissism (Chabrol et al., 2009). Also, there is a growing body of evidence showing that narcissism can also have a positive outcome for the person, such as social status, popularity, or leadership (Wai & Tiliopoulos, 2012), and it is still considered the "least dark" of all Dark Triad traits (Rauthmann & Kolar, 2012). While most narcissists have a tendency to behave in a disagreeable manner, they also exhibit extraverted behavior, probably with the aim of making a good first impression

(Paulhus, 2001). The description of narcissists as "disagreeable extraverts", in terms of the Five-Factor model of personality (Paulhus, 2001), has the greatest empirical support (e.g., Samuel & Widiger, 2008).

1.2. Heterogeneity of narcissistic traits

A number of studies demonstrated that narcissism is a heterogeneous trait. For instance, some researchers found three subordinate aspects of narcissism, i.e., leadership/authority, grandiose exhibitionism, entitlement/exploitativeness, which have divergent associations with external criteria (Ackerman, Witt, Donnellan, Trzesniewski, Robins & Kashy, 2011). Researchers also found that narcissism has both adaptive and maladaptive aspect (Barry, Frick, Adler, & Grafeman, 2007; Barry & Wallace, 2010; Hill & Lapsley, 2011). While the maladaptive narcissism correlates positively with self-reliance, adaptive narcissism correlates with social skills, interpersonal relations and self-esteem; furthermore, they found that maladaptive narcissism is associated with delinquency, while adaptive narcissism is not (Barry, et al., 2007).

Recent literature reports on two relatively distinct forms of narcissism, commonly referred to as Grandiose and Vulnerable narcissism (Miller, Hoffman, Gaughan, Gentile, Maples, & Campbell, 2011). Grandiose narcissism is characterized by an unrealistically positive self-view, a strong self-focus, feelings of entitlement, and a lack of regard for others; The Vulnerable, in contrast, reflects a defensive and insecure sense of grandiosity that obscures feelings of inadequacy, incompetence, and negative affect (Campbell & Miller, 2011). The study by Houlicroft, Bore, & Munro (2012) empirically supported the distinction between Grandiose and Vulnerable narcissism, but they also argued that a third type of narcissism, i.e., Aggressive narcissism can be detected. Unlike Grandiose or Vulnerable narcissism, Aggressive narcissism is markedly hostile and antisocial. Similar subtypes of narcissism were also identified: e.g., Arrogant, Shy and Psychopathic narcissism by Ronningstam (2005), High Functioning/Exhibitionistic, Fragile and Grandiose/Malignant by Russ, Shedler, Bradley, and Westen (2008).

1.3. Narcissism and general personality traits

During the last decade, researchers have made significant efforts to investigate the relations between narcissism and general personality traits. In terms of the most popular Five Factor Model of personality, narcissism is usually described as a combination of high Extraversion and low Agreeableness (Paulhus, 2001; Samuel & Widiger, 2008). Lee and Ashton (2005) found that narcissism is positively related to Extraversion and negatively to Honesty-Humility from HEXACO model of personality. Another study of Lee and colleagues (Lee, et al., 2013) showed that narcissism has different relations with HEXACO traits than other Dark Triad traits, except in the case of Honesty-Humility. In the three studies conducted by De Vries, De Vries, De Hoogh, & Feij (2009), the relationships between HEXACO personality traits and egoism, a construct very similar to narcissism, were investigated. They

found that both kinds of egoism, hostile and narcissistic, are associated with low Honesty-Humility. In addition, Hostile egoism is negatively associated with Emotionality, Extraversion and Agreeableness, while Narcissistic egoism is positively correlated with Conscientiousness and Openness.

Since Honesty-Humility trait was reported as highly relevant for understanding of Dark personality, several studies were investigating the relations of Dark triad traits and facets of Honesty-Humility. These studies have shown that psychopathy and Machiavellianism have higher correlations with Fairness and Sincerity than with Greed Avoidance and Modesty, contrary to narcissism, which has highest correlations with Greed Avoidance and Modesty (Lee & Ashton, 2005; Jonason & McCain, 2012). These results suggest that narcissism has a somewhat different nature than the other dark triad traits, at least in their relations with the general personality characteristics.

1.4. The present research

Previous studies revealed that narcissism is a very complex phenomenon, associated with antisocial and immoral, but also with different socially acceptable aspects of human behavior. This is specific for narcissism and distinguishes it from other Dark traits: psychopathy, Machiavellianism and sadism (e.g., Jonason & Kroll, 2015; Kauten & Barry, 2016). In the present research we explored the dark/immoral and benign aspects of narcissism in more detail. Our approach was based on partialling out the variance of narcissism associated with other Dark traits. In this manner, two new variables were obtained: the one which correlates with the Dark traits - Dark narcissism, and the other, independent from them, named Light narcissism. Additionally, we explored the relations of these new variables with various personality and behavioral indicators. To avoid the impact of methodological variance, in the three studies we conducted, we used three different operationalizations of narcissism. The first study was aimed to explore the relationships of Dark and Light narcissism with general personality traits. The goal of the second study was to identify the clusters of individuals based on two forms of narcissism and to explore the personality differences between them. Finally, additional differences between the Dark and Light narcissism were examined in the third study where two forms of narcissism were linked to schizotypy, unrestricted sociosexuality, and psychopathic behavioral characteristics.

2. STUDY 1.

The first study was aimed to investigate the possibility of differentiating the two types of narcissism by relating them to HEXACO personality traits. One type of narcissism is hypothesized to share the variance with other dark traits, i.e., Dark narcissism, while the other is expected to be independent from them (i.e., Light narcissism). Bearing previous studies in mind (Lee & Ashton, 2005; Jonason & McCain, 2012), we hypothesized that the Dark narcissism would be negatively associated with aspects of Agreeableness, Conscientiousness and Emotionality, while

Light narcissism would be correlated with Extraversion and Conscientiousness. In addition, we expected that both narcissisms might correlate negatively with the facets of Honesty; specifically, Dark narcissism would correlate negatively with the traits which are more related to morally-relevant behaviors, such as Fairness and Sincerity, while Light narcissism would correlate negatively with Greed Avoidance and Modesty as more benign aspects of the Honesty domain.

2.1. Method

2.1.1. Sample

The sample consisted of 402 participants (76% female); mean age was 28.3 years (SD = 6.95), mean years of education was 15.6 years (SD = 3.31). Data were collected online. Participants were offered to receive a feedback regarding their results on the administrated questionnaires. Further details on the sample can be found in our previous report (*reference omitted*).

2.1.2. Measures

Narcissistic Personality Inventory - 13 (NPI-13; Gentile, Miller, Hoffman, Reidy, Zeichner, & Campbell, 2013) was used for the exploration of narcissistic characteristics. It encompasses 13 items consisting of pairs of statements, such as "(A) When people compliment me I sometimes get embarrassed" and "(B) I know that I am good because everybody keeps telling me so", and the respondent has to choose one of them. Only mean total scores on NPI-13 were used in the analyses (M=.56, SD=.18; α =.63).

MACH-IV (Christie & Geis, 1970; Jones & Paulhus, 2009) is a 20-item measure of Machiavellianism. Items reflect an endorsement of manipulative tactics (i.e., Machiavellian tactics), a cynical attitude towards human nature (i.e., Machiavellian views), and a pragmatic morality (i.e., Machiavellian morality). Only the total mean score was used in the analyses (M=2.44, SD=.55; α =.74).

Self-Report Psychopathy Scale (SRP-3; Paulhus, Neumann, & Hare, in press) is a 64 item self-report inventory designed to assess four facets of psychopathy: Interpersonal Manipulation, Callous Affect, Erratic Lifestyle, and Antisocial Tendencies. The total averaged psychopathy score was included in the analyses (M=2.14, SD=.38; α =.87).

Varieties of Sadistic Tendencies inventory (VAST: Paulhus & Jones, 2015) is a 16-item measure of different manifestations of sadism. It contains items assessing Direct sadism (e.g., "I enjoy hurting people"), and Vicarious sadistic interests (e.g., "In video games, I like the realistic blood sports"). The mean score on all items was used in the analyses (M=2.06, SD=.55; α =.78).

HEXACO-PI-R (Lee & Ashton, 2004) inventory was administered for assessment of basic personality traits defined by the HEXACO model: Honesty–Humility,

Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience. The version consisting of 100 items was used in this study, with only the facets scores included in the analyses. Reliability coefficients (Cronbach's alpha) for facets ranged from .58 for Anxiety to .76 for Sociability and Fairness (*reference omitted*).

All used instruments are self-report questionnaires with 5 point Likert-type scale (1 = strongly disagree, 5 = strongly agree), except for the NPI-13, which has forced-choice dichotomous items.

2.2. Results

In order to explain the variance of narcissism, we tested a regression model with Machiavellianism, psychopathy and sadism as predictors and narcissism as criterion variable ($R^2=.12$; $F=20.438$, $df=3$, $p<.01$). The regression analysis showed that, although all of the "dark" traits have moderate correlations with narcissism, only psychopathy and Machiavellianism have a significant contribution to the prediction of criterion. The individual contributions of the predictor to the regression model are shown in Table 1.

Table 1. Prediction of narcissism by Machiavellianism, psychopathy and sadism

	First study		Second study		Third study	
	β	r	β	r	β	r
Machiavellianism	.13**	.26**	.36**	.40**	.07	.32**
Psychopathy	.25**	.32**	.12*	.30**	.57**	.51**
Sadism	.01	.22**	-.04	.22**	.09	.23*

Notes: β -standardized regression coefficient; r-correlation between the predictor and the criterion measure; *- $p<.05$; **- $p<.01$.

Based on the results of regression analysis, variance of narcissism associated with the Dark traits, labeled Dark narcissism, was saved as a standardized predicted value while the narcissism's variance that was independent from the Dark traits, labeled Light narcissism, was saved as a standardized residual. Both of these variables were used in the following regression models as criterions. The results of the regressions of Dark and Light narcissism on the facets of HEXACO personality traits are shown in Table 2.

Table 2. Prediction of the Dark and Light narcissism by the HEXACO facets

	Dark narcissism		Light narcissism	
	β	r	β	r
Sincerity	-.24**	-.37**	.03	-.07
Fairness	-.23**	-.48**	.00	-.04
Greed Avoidance	-.02	-.22**	-.30**	-.38**
Modesty	-.01	-.17**	-.23**	-.35**
Fearfulness	-.15**	-.27**	-.05	-.09
Anxiety	-.14**	-.07	.18**	.12*
Dependence	-.09*	-.16*	.01	.03
Sentimentality	-.15**	-.34**	-.04	-.06
Social Self-Esteem	-.09	-.20**	.01	.19**
Social Boldness	-.02	.03	.12**	.23**
Sociability	-.01	-.16*	.10*	.20**
Liveliness	.02	-.19**	.13*	.20**
Forgiveness	.01	-.22**	-.00	-.14*
Gentleness	-.15**	-.29**	-.13**	-.23**
Flexibility	.01	-.23**	-.03	-.20**
Patience	-.21**	-.33**	-.01	-.17**
Organization	-.03	-.19**	-.10	.01
Diligence	-.12**	-.30**	.14**	.23**
Perfectionism	.11**	-.08	-.06	.08
Prudence	-.13**	-.35**	.07	.04
Aesthetic Appreciation	-.11**	-.28**	.06	.08
Inquisitiveness	.03	-.10	-.07	.02
Creativity	-.02	-.17**	.04	.11*
Unconventionality	.04	.04	.03	.13*
F		19.69**		9.80**
R ²		.55		.38

Notes: β -standardized regression coefficient; r-correlation between the predictor and the criterion measure; F-the F statistic magnitude; R²-the determination coefficient; *- p<.05; **- p<.01

The regression analyses have shown that the facets of Honesty-Humility are the most important predictors of both Dark and Light narcissism. However, it would be meaningful to note that Sincerity and Fairness had significant negative contribution to the explanation of Dark narcissism, whereas Light narcissism was predicted by Greed Avoidance and Modesty, also with a negative sign. All facets of Emotionality contributed negatively to the prediction of Dark narcissism. Facets of this domain did not predict Light narcissism, except for Anxiety, which was positively associated with it. All facets of Extraversion, aside from Social self-esteem, had a significant positive contribution only to the prediction of Light narcissism. Gentleness, a facet of Agreeableness, was a significant predictor (with a negative sign) of both narcissistic forms, while Patience contributed negatively exclusively to the explanation of the Dark narcissism. Dark narcissism was also substantially negatively associated with all facets of Conscientiousness; Light narcissism was associated positively only with Diligence. Openness was not a significant predictor for neither of the narcissism forms, with the exception of Aesthetic Appreciation which negatively predicted Dark narcissism.

2.3. Discussion

Main finding of the Study 1 is that Dark and Light narcissism have different patterns of relationships with HEXACO personality traits, except in the case of Agreeableness facets. The results confirmed our hypotheses that Dark and Light narcissism differ with respect to relations with Honesty-Humility trait and are in line with previous results (Lee & Ashton, 2005; Jonason & McCain, 2012). "Dark" narcissism is characterized by low Sincerity and Fairness from the Honesty-Humility domain, low scores on all facets of Emotionality, low Gentleness and Patience from Agreeableness domain, low scores on all facets of Conscientiousness and a low score on Aesthetic Appreciation from the Openness domain. This profile corresponds to the profile of an antisocial personality (De Vries & Kampen, 2010). Light narcissism is characterized by low Greed Avoidance, Modesty and Gentleness, high Anxiety, higher scores on almost all facets of Extraversion and higher Diligence. Light narcissism is related to immodest but sociably-acceptable personality characteristics, which are not directly related to antisocial behavior. These results are well in line with studies showing that narcissism has two forms, bright and dark (Back, Küfner, Dufner, Gerlach, Rauthmann, & Denissen, 2013, Book, Visser & Volk, 2015), and that some aspects of narcissism are not related exclusively to indicators of aggressive and antisocial behavior, as other dark traits are (Rauthmann & Kolar, 2012; Houlcroft et al., 2012; Pailing et al., 2014).

3. STUDY 2

Results of study 1 indicated the existence of two form of narcissism, i.e., Dark and Light, which differ with respect to relations with basic personality traits. One can always question if these constructs are merely a statistical artifact of variance partialization, or they indeed represent distinct traits? If there are individuals high on the Dark and low on Light narcissism (and the opposite), and if groups of such individuals differ meaningfully on relevant psychological characteristics, that would further validate two aspects of narcissism. In order to test this hypothesis we conducted a cluster analysis on the traits of Dark and Light narcissism and compared obtained groups on general personality traits. We expected similar differences in personality like the ones obtained in Study 1: Dark narcissists should be characterized by personality traits representing dispositions toward immoral and antisocial behavior, i.e., low Honesty, Emotionality, Agreeableness and Conscientiousness, while Light narcissists should have elevated levels of Extraversion.

3.1. Method

3.1.1. Sample

There were 541 respondents in Study 2. The average age of the participants was 24 years (SD=6.04) with 76% of them being female. On average respondents had 14 years of formal education (SD=3.29). The data were collected on-line. Participants were offered a feedback regarding their scores on administered questionnaires.

3.1.2. Measures

Psychopathy, narcissism and Machiavellianism were measured by the Short Dark Triad questionnaire (SD3; Jones & Paulhus, 2014). All of the three traits were measured by 9 items. Descriptive statistics and scale reliabilities were as followed: M=2.37, SD=.58, $\alpha=.65$ for psychopathy, M=2.92, SD=.49, $\alpha=.66$ for narcissism and M=2.81, SD=.70, $\alpha=.77$ for Machiavellianism.

For assessment of Sadism, Short Sadistic Impulse Scale was used (SSIS: O'Meara, Davies, & Hammond, 2011). Scale contains 10 items assessing sadistic impulses (M=1.41, SD=.58, $\alpha=.85$).

Personality traits were assessed with HEXACO-60 scale, 10 items per each trait (Ashton, & Lee, 2009). The scores on domain scales were used in analyses: Honesty-Humility (M=3.65, SD=.62, $\alpha=.69$), Emotionality (M=3.31, SD=.66, $\alpha=.75$), Extraversion (M=3.26, SD=.65, $\alpha=.77$), Agreeableness (M=2.97, SD=.62, $\alpha=.72$), Conscientiousness (M=3.61, SD=.63, $\alpha=.78$) and Openness (M=3.77, SD=.70, $\alpha=.80$). All of the used measures are self-report questionnaires with a standard 5-point Likert type scale (1 = "strongly disagree", and 5 = "strongly agree").

3. 2. Results

3.2.1. Obtaining the Dark and Light narcissism measures

We used the same method for the extraction of the Dark and Light narcissism's variance, as described in Study 1. The narcissism score was set as a criterion in the regression analysis, while psychopathy, Machiavellianism and sadism were predictors. A significant regression function was obtained ($R^2=.17$; $F=37.10$, $df=3$, $p<.01$). Similarly to the results of the Study 1, analysis showed that all of the predictors correlate positively with the criterion, however, only psychopathy and Machiavellianism independently contributed to prediction of narcissism. The individual contributions of the predictor to the regression model were shown in Table 1.

3.2.2. Exploring the clusters of participants with respect to Dark and Light narcissism

We conducted a two-step cluster analysis to explore potential differences between the group profiles regarding the two forms of narcissism. In the first step, we conducted a hierarchical cluster analysis, following the procedure described by Chabrol and colleagues (Chabrol et al., 2015). The Ward method was used for the cluster extraction with the squared Euclidean distance as a measure of group distances. Based on the dendrogram and the agglomeration schedule, a three-cluster solution was identified. In the second step of analysis, K-means clustering was used to examine the three-cluster structure. Group means on the measures of narcissism are shown in Diagram 1.

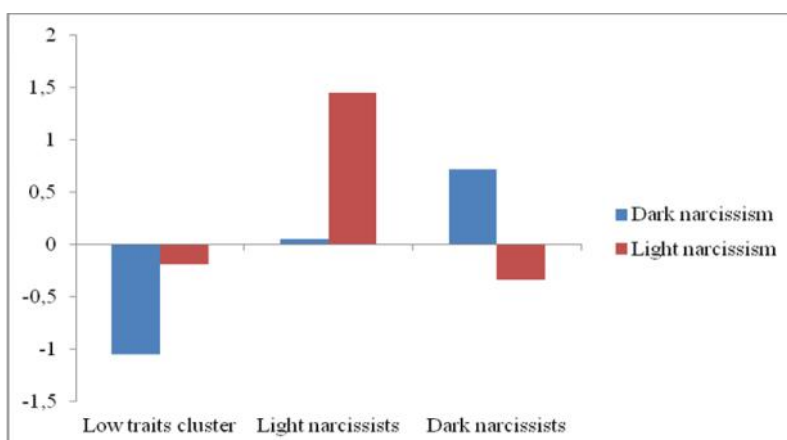


Diagram 1. Three clusters extracted by different profiles on narcissism measures

The first group was labeled the *Low narcissists* cluster (N=188, 35% of the sample) because both Light and Dark narcissism z-scores were below zero. The second group (N=86, 16% of the sample) was described by high Light ($z=1.45$) and low Dark narcissism ($z=0.05$), and it was labeled *Light narcissists*. Finally, the third group (N=267, 49% of the sample) was described by the opposite pattern, i.e., high Dark and low Light narcissism (Dark narcissism: $z=0.72$; Light narcissism: $z=-0.34$). This group was labeled *Dark narcissists*. As expected, cluster of individuals with high scores on both Dark and Light narcissism was not extracted. Results of discriminant analysis showed that two discriminant functions ($R_{c1}=.81$, Wilk's $\lambda=.21$, $\chi^2_{(4)}=832.368$, $p<.01$ and $R_{c2}=.63$, Wilk's $\lambda=.60$, $\chi^2_{(1)}=272.218$, $p<.01$) discriminate three detected clusters, with 94.3% correctly classified original grouped cases.

3.2.3. Differences between the clusters of narcissistic individuals on personality traits

The final analysis conducted in this study was aimed to explore personality differences of the individuals belonging to different clusters. To test these hypotheses, we conducted a multivariate analysis of variance (MANOVA). Results showed that there is a significant effect of the three groups of narcissists on the multivariate composite of personality traits (Wilk's $\lambda=.736$, $F_{(12,1066)}=14.699$, $p<.01$, $\eta^2=.14$). The results of univariate tests are provided in Table 3.

Table 3. Personality differences between the clusters of narcissistic individuals

	Low traits cluster		Light narcissists		Dark narcissists		F	Significant comparisons (Scheffe) [†]
	M	SD	M	SD	M	SD		
Honesty	3.99	.54	3.74	.54	3.37	.57	69.75**	LTC > LN > DN
Emotionality	3.28	.70	3.43	.67	3.29	.63	2.04*	LN > LTC, DN
Extraversion	3.31	.67	3.26	.65	3.19	.65	4.23**	LTC, LN > DN
Agreeableness	3.16	.58	3.03	.57	2.81	.63	18.90**	LTC, LN > DN
Conscientiousness	3.67	.66	3.70	.62	3.53	.61	3.64*	LTC, LN > DN
Openness	3.92	.62	3.83	.69	3.64	.74	9.45**	LTC, LN > DN

Notes: M-mean; SD-standard deviation; LTC- Low traits cluster; LN- Light narcissists; DN- Dark narcissists; *- $p<.05$; **- $p<.01$; [†]-all significant comparisons are at least on the level of $p<.05$.

As seen from Table 3, the trait that has the best discrimination power with regard to narcissistic profiles is Honesty-Humility. Participants with low narcissistic traits have the highest score on this personality dimension, followed by the Light narcissists, and Dark narcissists, who have the lowest score. Light narcissists have the highest levels of Emotionality, compared to the other two groups. Finally, there is a similar pattern of differences in Extraversion, Agreeableness, Conscientiousness and Openness scores: Low narcissists and Light narcissists do not differ in these traits, but the scores in these groups are significantly higher than in Dark narcissists.

3.3. Discussion

Results of the Study 2 provided further evidence regarding the validity of the Dark and Light narcissism concepts. We were able to extract two clusters which are important for their validation: individuals with high Dark and low Light narcissism (Dark narcissists) and the individuals with the opposite pattern of the traits (Light narcissists). Moreover, the cluster of individuals with both of the traits elevated was not detected. This finding is expected: if the two forms of narcissism are indeed representing different personality profiles, than a person cannot be a Dark and a

Light Narcissist at the same time. The third extracted cluster was depicted by low levels of both narcissism aspects.

Altogether, it is possible to obtain meaningful profiles of individuals regarding narcissism that differ in general personality traits in a conceptually predictable manner. The results of MANOVA confirmed our hypothesis with respect to the differences between the narcissism subtypes on personality traits. In fact, the pattern of differences is congruent not only with the results of the Study 1, which indicate that the Dark narcissists are the most dishonest and arrogant, but is also in line with previous findings demonstrating low Honesty as the core of the Dark personality (Book, Visser, & Volk, 2015; Međedović, 2012). Emotionality is more pronounced in Light narcissists, and it probably originates in elevated levels of Anxiety, as the first study demonstrated. This finding provides further evidence that Light narcissists have some vulnerable characteristics, like lower tolerance to frustration and stress (Miller, Hoffman, Gaughan, Gentile, Maples, & Campbell, 2011). Finally, Dark narcissists have significantly lower Extraversion, Agreeableness, Conscientiousness and Openness scores. The results regarding Extraversion are in line with the findings on positive correlation between Light narcissism and this personality trait obtained in Study 1. The findings about lower levels of Agreeableness and Conscientiousness in the Dark Narcissist group are congruent with prior data on negative relations between these dimensions and psychopathy (Paulhus & Williams, 2002) and delinquency (Jones, Miller & Lynam, 2011).

4. STUDY 3

In study 3 we were interested in finding additional distinctions between Dark and Light narcissism. According to Hare's conception of psychopathy, parasitic and irresponsible lifestyle, antisocial behavior and unrestricted sexuality are its important behavioral indicators (Hare, 2003).

Therefore, we were interested in relations between two forms of narcissism and the behavioral psychopathic traits. The core conception of Dark narcissism should be reflected in positive relations with antisocial and criminal behavior, while the opposite should stand for Light narcissism. Considering the previous findings suggesting the relations between narcissism and heightened sociosexuality (Mouilso & Calhoun, 2012), we were also interested in further investigation of narcissism's relations to unrestricted sexual behaviour. Since the Dark Triad traits are associated with a short-term mating strategy in men (Jonason, Li, Webster & Schmitt, 2009), we assume that Dark, but not Light narcissism would be related to unrestricted partner relations. Finally, the relations between narcissism forms and schizotypy are explored. Being an operationalization of psychotic-like experiences (Van Os, Linscott, Myin-Germeys, Delespaul, & Krabbendam, 2009), schizotypy can represent a valid index of mental health in subclinical populations (Goulding, & Ödehn, 2009). Previous research has shown that schizotypy has several common characteristics with psychopathy (Ragsdale, Mitchell, Cassisi & Bedwell, 2013), and has

revealed it as a disposition toward consistent antisocial behavior (Međedović, Kujačić, & Knežević, 2012). Based on data, we hypothesized that Dark narcissism would be positively related to psychosis-proneness.

4.1. Method

4.1.1. Sample and procedure

The sample consisted of 181 male prisoners serving a sentence in two penitentiary institutions in Serbia. All subjects participated on a voluntary basis. The mean age was 35 years ($SD=10$). Respondents had on average ten years of education (i.e., second year of high school). All participants had elementary reading skills. In the first part of data collection participants filled out the self-report questionnaires of personality, psychopathy, sadism, Machiavellianism and schizotypy. In the second part of data acquisition, participants were interviewed and rated on behavioral indicators.

4.1.2. Measures

In this study the *narcissism* was not measured directly. We used the participants' scores on HEXACO personality scales to calculate the proxy measure of narcissism, following the procedure mentioned in the previous study, where HEXACO-PI-R was used for calculating the measure of psychopathy (Witt, Donnellan & Blonigen, 2009). We followed the general recommendations from this approach (calculating the correlations between the inventory items and the full narcissism scale and using items with significant correlations above .30) and calculated the measure of narcissism, using the data from Study 1. The HEXACO narcissism scale consisted of 20 items (the items are presented in Supplementary material 1) and it had multiple R with the total score of NPI of .73. We calculated the score for the narcissism scale for the present study in the same manner, since we administrated the HEXACO-PI-R in this sample too. The scale reliability was $\alpha=.69$ ($M=2.89$; $SD=.50$).

Psychopathy was measured with SRP-3 scale (Paulhus, Neumann, & Hare, in press). It contains 64 items and only the total averaged score on the scale was used in the analysis ($M=2.58$; $SD=.65$; $\alpha=.94$). *Sadism* and *Machiavellianism* were assessed by the Amoralism scale (Knežević, Radović, & Peruničić, 2008; Paulhus & Jones, 2015). Sadism was measured with 5 ($M=1.87$; $SD=.74$; $\alpha=.66$) and Machiavellianism with four items ($M=3.25$; $SD=1.05$; $\alpha=.71$), with joint 5-point Likert type scale (1 = strongly disagree; 5 = strongly agree).

The Psychopathy Check List-Revised (PCL-R: Hare, 2003) was used for measuring two facets of psychopathic behavioral style: *Lifestyle* ($M=.82$; $SD=.48$; $\alpha=.73$) and *Antisocial tendencies* ($M=.72$; $SD=.55$; $\alpha=.74$). Lifestyle represents an irresponsible and erratic behavior style, whereas Antisocial tendencies depict the frequency and versatility of criminal behavior. PCL-R is a rating measure and the participants'

behavior was rated by the authors of this report. Both Lifestyle and Antisocial tendencies were measured by two sets of five behavioral indicators, which were rated on the following scale: 0 if rated indicator (behavior) was absent, 1 if it was present in some degree and 2 if it was present in a high degree.

There are several questions in the PCL-R used for assessment of two psychopathy items not belonging to any of the narrower psychopathy facets (Hare & Neumann, 2009). These questions assessed the following topics: the age of the first sexual intercourse, total number of sexual partners, simultaneous romantic involvement (e.g., how many times he was involved in multiple relationships) and infidelity to the romantic partner (e.g., how many times he cheated on his partner). Factor analysis of these four indicators using the Principal component analysis yielded a robust latent factor explaining 40% of the original items' variance. It was labeled as *Unrestricted sociosexuality* and saved as a separate variable in the data matrix using the regression method.

Finally, *schizotypy* was measured using the Disintegration construct, a comprehensive disposition towards psychotic-like experiences (Knežević, Opačić, Kutlešić, & Savić, 2005). The DELTA 10 questionnaire measures ten aspects of dysfunctional psychological experience: General executive dysfunction, Perceptual distortions (depersonalization and derealization), Enhanced awareness, Depression, Paranoia, Mania, Social anhedonia, Flattened affect, Somatoform dysregulation (experiences of body change) and Magical thinking. The instrument has 30 items with joint 5-point Likert type scale. Only the total mean score on the inventory was calculated. Its reliability was high ($M=2.14$; $SD=.60$; $\alpha=.89$).

4.2. Results

4.2.1. *Partialization of narcissism's variance*

Similarly to Studies 1 and 2, the narcissism score was set as a criterion variable in the regression, while psychopathy, sadism and Machiavellianism were predictors. A significant regression function was obtained ($R^2=.32$; $F=38.9$, $df=3$, $p<.01$). Results showed that all of the three traits correlate positively with the criterion measure. However, only psychopathy had independent contribution to the prediction in this sample. The individual contributions of the predictor to the regression model are shown in Table 1.

4.2.2. *Differences between the Dark and Light narcissism in schizotypy and behavioral characteristics*

The main analysis conducted in this study was aimed to explore differences between the two forms of narcissism. Dark and Light narcissism were set as criterion variables, whereas Lifestyle, Antisocial tendencies, Unrestricted sexuality and schizotypy were entered as predictors. Both regression functions

were statistically significant. Their characteristics and contributions of predictors are shown in Table 4.

Table 4. The regression functions obtained in the prediction of Dark and Light narcissism

	Dark narcissism		Light narcissism	
	β	r	β	r
Lifestyle	.21*	.49**	.21*	.03
Antisocial tendencies	.33**	.55**	-.20*	-.12
Unrestricted sociosexuality	.16*	.27**	.14	.10
Disintegration	.23**	.36**	-.25**	-.25**
F	25.14**		4.20**	
R ²	.41		.10	

Notes: β -standardized regression coefficient; r-correlation between the predictor and the criterion measure; F-the F statistic magnitude; R²-the determination coefficient; * - $p < .05$; ** - $p < .01$.

As seen from Table 4, the high amount of Dark narcissism variance was explained by the analyzed predictors (41%). All of the predictors contributed positively to the Dark narcissism. The regression function of Light narcissism as a criterion was different, in terms of several parameters. The percentage of explained variance was much lower (10%). The following predictors had independent contribution to the prediction: Antisocial tendencies and Disintegration had negative, while Lifestyle had positive relations with Light narcissism.

4.3. Discussion

Since Dark and Light narcissism were obtained by partialling out the variance of narcissism that can and cannot be explained by the Dark traits, we expected that the Dark narcissism would be associated with antisocial behavior. Indeed, the regression analysis confirmed this hypothesis. In fact, not only that Dark narcissism had a positive relation with antisocial behavior, results have also shown that Light narcissism is negatively related to delinquency. This finding goes in favor of earlier conceptions of adaptive and maladaptive narcissism (Barry, Grafeman, Adler, & Pickard, 2007), where only the maladaptive form of narcissism is related to delinquency (Barry, Pickard & Ansel, 2009). Present findings provide evidence that Dark narcissism may contain the key features of maladaptive narcissism, while Light narcissism may represent its adaptive form.

Previous conclusion can be further corroborated by the relations between two forms of narcissism and schizotypy. Earlier studies investigating these relations resulted in inconsistent findings (Grant, Chou, Goldstein, Huang, Stinson, Saha, ... & Ruan, 2008; Seah & Ang, 2008). The present study sheds some new light on these associations. Our data indicate that previously obtained positive relation between narcissism and psychosis-proneness can be narrowed to the association between the

Dark narcissism and schizotypy. This result is expected because previous findings have shown that schizotypy positively correlates with all of the remaining Dark Tetrad traits (Montag, Hall, Plieger, Felten, Markett, Melchers, & Reuter, 2015; Kujačić, Međedović, & Knežević, 2015; Međedović, 2015). However, Light narcissism has negative relation with schizotypy. The opposite associations of two forms of narcissism with psychosis-proneness could suppress one another, which would lead to zero correlation between schizotypy and the total score on the narcissism trait: the result which was obtained in a previous study (Seah & Ang, 2008). The present data show that the additional distinctions between the Dark and Light features of narcissism are needed to reveal the complex relations between narcissism and schizotypal experiences.

Earlier data indicated that narcissism is the disposition towards unrestricted sociosexuality (Mouilso & Calhoun, 2012). Frequent change of romantic and sexual partners in narcissists can be attributed to high agentic traits and low relationship commitment (Foster, Shrira, & Campbell, 2006). Individuals high in narcissism perceive the alternative partners as more desirable, which enables them to leave the current relationship more easily (Campbell & Foster, 2002). However, the link between narcissism and unrestricted sociosexuality is in fact based on the relation between Dark narcissism and sociosexuality, as our data suggest. This means that Dark narcissism behaves similarly to other Dark traits when it comes to sexual behavior (Jonason et al., 2009).

Finally, it would be interesting to mention one common characteristic of the two forms of narcissism: both Dark and Light aspects of narcissism are related to higher parasitic, carefree lifestyle based on a lack of long-time goals and irresponsibility. This behavioral pattern has been previously linked to deficiency in impulse control (Snowden & Gray, 2011), a personality characteristic which has been found to correlate positively with narcissism (Vazire & Funder, 2006).

5. GENERAL DISCUSSION

5.1. Two forms of narcissism and similarities between them

Past studies have shown that narcissism is a disposition towards immoral and antisocial behavior: it represents a part of a "dark" side of a personality (Paulhus & Williams, 2002). However, empirical data also suggested that narcissism could be more benign than other dark traits, since correlations between narcissism and other dark traits are somewhat lower than the correlations between other dark traits themselves (Furnham et al., 2014; Međedović & Petrović, 2015). Our studies explored the malevolent potentials of narcissism by separating its variance that correlates with the dark traits from the one which is independent from them. We labeled the variance associated with the dark traits as Dark narcissism and the unassociated variance as Light narcissism - a more benign disposition unrelated to the immoral personal dispositions.

It would be meaningful to emphasize the existing common features of two forms of narcissism both forms of narcissism have common characteristics. Both are based on low Honesty-Humility, lack of Agreeableness and tend to produce an irresponsible and parasitic lifestyle. The associations between narcissism and low Honesty and Agreeableness was documented in previous studies (Jonason, & McCain, 2012; Miller, Gaughan, Pryor, Kamen, & Campbell, 2009). Common markers of both aspects of narcissism are important not only for our understanding of the core features of this trait: they are substantial for establishing the construct validity of two forms of narcissism. If we assume that Dark and Light narcissism are merely statistical artifacts emerged from the partialization of the original scale's variance, then we should not expect the same relations with other constructs (due to the orthogonality of two new measures). Another evidence of the construct validity of the two forms of narcissism stemmed from the cluster analysis: meaningful profiles of narcissistic individuals emerged. The results of these analyses showed that individuals can develop only one form of narcissism while the other form is present in lower extent.

5.2. Characteristics of Dark narcissism

Besides the mutual characteristics, there are many crucial differences between the two aspects of narcissism; in fact, additional exploration of these differences was the key goal of the present research. Even though both forms are negatively related to Honesty-Humility, an interesting pattern of correlations emerged: they are related to different aspects of this trait. Dark narcissism correlates negatively with the aspects of Honesty that can be conceptually assumed as crucial to the morally-relevant personality dispositions: Sincerity and Fairness (Lee & Ashton, 2005; Jonason & McCain, 2012). Taking in consideration the finding that Dark narcissists have the lowest score on the Honesty trait, we can conclude that Dark narcissism is a part of the immoral side of a human personality.

Dark narcissists also have lower Emotionality than the Light ones. In addition, Dark narcissism correlates negatively with all of the Emotionality aspects, while Light narcissism correlates positively only with Anxiety. Previous data have suggested that the relations of the Emotionality factor and narcissism are close to zero (Jonason & McCain, 2012; Lee & Ashton, 2005; Miller et al., 2009). However, our data go slightly further, and propose that this relation is more complex: the dark features of narcissism have negative, while light can have positive correlations with Emotionality, which results in total correlation near to zero. Previous research found that low Emotionality is related to the various forms of immoral tendencies (De Vries & Kampen, 2010), which is in line with our data.

Dark narcissism is also depicted by lower levels of Agreeableness and Conscientiousness. Agreeableness has been recognized as a reliable predictor of narcissism by the HEXACO model (Miller et al., 2009). Conscientiousness is not usually identified as a trait associated with narcissism, so we can assume that this relation is specific to Dark narcissism only. In fact, low Conscientiousness as a distinctive correlate of Dark narcissism could be expected: negative poles of

Agreeableness and Conscientiousness associated not only with the Dark Triad (Paulhus & Williams, 2002), but with the criminal and antisocial behavior as well (Jones et al., 2011).

Dark narcissism is also related to psychotic-like experiences. It seems that Dark narcissism is characterized by schizotypal disorganization of thoughts and emotions, which suggests that this form of narcissism is related to a decrease in psychological functioning. We believe that this link can be viewed in the context of antisocial behavior: previous findings showed that psychosis and schizotypy are related to violent and criminal behavior (Douglas, Guy, & Hart, 2009; Međedović et al., 2012).

All previously described relations of Dark narcissism with personality traits consistently suggest that this aspect of narcissism is a disposition toward antisocial behavior. Contrary to Light narcissism, the dark form is related to the heterogeneity of criminal behavior, and its temporal stability. The link between narcissism and delinquency is obtained in earlier research (Barry et al., 2009). All of the previous results are consistent and converge to the description of Dark narcissism as an immoral disposition related to delinquency and antisocial behavior. If we take into account that Dark narcissism is characterized by elevated potential for psychopathology, we can conclude that this trait is very similar to the previously described concept of *Maladaptive narcissism* (Barry et al., 2007; 2009). In fact, narcissistic traits that represent malevolent, aggressive aspects of this construct have been obtained in previous studies showing that Dark narcissism is quite similar to Aggressive (Houlcroft et al., 2012), Arrogant (Ronningstam, 2005) or Grandiose/Malignant narcissism (Russ et al., 2008).

5.3. Characteristics of Light narcissism

Several characteristics of Light narcissism have already been mentioned in the previous discussion. First of all, this benign form of narcissism is negatively related to Greed avoidance and Modesty facets of the Honesty-Humility factor. Although this result implies that Light narcissism is associated with materialistic values and high evaluation of oneself, these traits do not necessarily include the presence of immoral tendencies, which is different from Dark narcissism. Second, Light narcissism is predicted by elevated levels of Anxiety, as an opposite to Dark narcissism. This result indicates that Light narcissism may share some characteristics with Vulnerable narcissism: more pronounced anxiety (Miller et al., 2011). However, it is interesting to point out that this is the only common feature of Light and Vulnerable narcissism. Light narcissism is characterized by high Extraversion, which previous findings have already confirmed (O'Boyle et al., 2014). It shares a negative relation with the Gentleness aspect of Agreeableness together with the Dark aspect; nevertheless, it shows a slightly elevated ability of impulse control, reflected in the Conscientiousness facet of Diligence. In light of the previous findings, it is not surprising that Light narcissism is followed by improved psychological functioning, expressed in negative correlation with schizotypy. Finally, Light narcissism is negatively related to antisocial behavior.

All of the previous findings converge to the conclusion that the Light narcissism is comparable to the concept of *Adaptive narcissism* (Barry et al., 2009). Adaptive narcissism also shows negative relations to various forms of psychopathology (Miller et al., 2011), improved interpersonal relations and social skills (Barry, & Wallace, 2010), and negative relations with some measures of criminal behavior (Barry et al., 2007). In the literature there are conceptualizations of narcissism which resemble our definition of Light narcissism: e.g., High-Functioning Exhibitionist narcissism (Russ et al., 2008) or Leadership/Authority (Ackerman et al., 2011).

5.4. Two forms of narcissism and Life History Theory

Is there some wider conceptual framework that we could use to interpret Dark and Light narcissism? We believe that Life History Theory (LHT) may provide a coherent and meaningful analytic point for additional understanding of these two aspects of narcissism. LHT is an evolutionary theory that describes the trade-offs individuals make to optimize their fitness (Del Giudice & Belsky, 2011). There are two main trade-off strategies that correspond to the *r* and *k* type of natural selection (Reznick, Bryant, & Bashey, 2002): "fast" or *r*-selected (i.e., early maturation and reproduction, quantity over quality, mating over parenting) and "slow" or *K*-selected (the opposite pattern). Fast and slow strategies represent two poles of a single continuum of reproductive strategies and every individual can be placed somewhere on that continuum.

A key finding which suggests that Dark and Light narcissism can be interpreted from the point of LHT comes from the research that analyzed the latent space of Dark Triad measures and LH strategies (McDonald, Donnellan & Navarrete, 2012). The results showed that some aspects of narcissism (Entitlement/Exploitativeness from the NPI inventory) occupied the same latent space with antisocial tendencies, aggressiveness, Machiavellianism and elevated sociosexuality. Authors interpreted this factor as a fast LH strategy. The second factor gathered other markers of narcissism (Leadership/Authority and Grandiose Exhibitionism from NPI) and emotional/interpersonal aspects of psychopathy. It was interpreted as a slow LH strategy. The involvement of Entitlement/Exploitativeness facet of narcissism in the fast LH strategy, together with antisocial tendencies and high frequency of changing sexual partners is completely congruent with the findings on Dark narcissism obtained in Study 3. Light narcissism did not correlate negatively with sociosexuality in our data (the correlation was not significant), however, we may assume that Dark and Light narcissism might represent indicators of relatively different reproductive strategies. Criminal behavior, Dark Triad and several personality traits that correlate with Dark narcissism such are unpredictability, hostility, manipulativeness and impulsivity, also represent indicators of a fast LH strategy (Dunkel, Mathes, & Beaver, 2013; Jonason, Li, & Czarna, 2013; Sherman, Figueredo, & Funder, 2013). It seems that Dark narcissism is a better indicator of a fast LH strategy, while Light aspect is an indicator of a slow LH strategy. Our data suggest that LHT provides valuable conceptual framework for explaining the heterogeneity in narcissistic characteristics. It may provide further explanation on the reason why narcissistic

persons are perceived as attractive (Holtzman, & Strube, 2010) and why narcissists are prone to use specific sexual strategies such as coaxing tactics (Jones & Olderbak, 2014). Our data suggest that all of these relations between narcissism and fast LH strategy could be attributed to Dark, but not to Light narcissism.

6. CONCLUDING REMARKS

The main question we tried to answer in the present research is: Are narcissistic traits inevitably related to immoral and antisocial tendencies? Three studies provided the same answer: no. Although narcissism is conceptualized as a trait belonging to the Dark side of personality, results showed that there is another side of narcissism: the one which is more benign, benevolent and which is not necessarily related to immoral personal dispositions or behavior. Individuals can have one form of narcissism elevated, while the other is decreased. Empirical data from all three studies considering the construct validity of two narcissistic aspects were consistent: a) Dark narcissism is related to personality dispositions that generate immoral behavior (especially low Honesty and Emotionality), unrestricted sociosexuality, psychological dysfunctions and antisocial behavior; b) Light narcissism is related to higher anxiety, but also to elevated levels of Extraversion, better psychological functioning and a lower antisocial behavior. The two forms of narcissism analyzed in the present research resemble the concepts of maladaptive and adaptive narcissism. Also, Dark narcissism probably represents the indicator of a fast Life History strategy, thus providing evidence that, besides its maladaptive and dysfunctional characteristics, it may have a specific evolutionary pathway which contributes to its presence nowadays.

There are several limitations of the current research. Some of them are methodological in their nature: we did not analyze the scores on the NPI facets in the Study 1 because some of them had low reliabilities. The measure of narcissism in Study 3 was extracted from HEXACO-PI-R items, so it must be considered a proxy measure which has its disadvantages. Conceptual limitations refer to the lack of criterion measures for more detailed analysis of construct validity of Dark and Light narcissism. It would be important to additionally explore the position of these two constructs in the space of different measures of narcissism, for example, exploration of relations between Dark and Light on one side and Grandiose and Vulnerable narcissism, as the most relevant criterion measures, on the other. In addition, future studies should explore the nomological network of two narcissistic forms, with the investigation of measures conceptually important for the Dark personality, such as reactive and proactive aggression and emotion regulation.

ACKNOWLEDGMENTS

Authors would like to express their gratitude to Ljiljana Lazaravić and Tara Bulut for help in the preparation of the article.

REFERENCES

- (1) Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the narcissistic personality inventory really measure? *Assessment*, 18(1), 67–87. doi: 10.1177/1073191110382845
- (2) Ashton, M. C., & Lee, K. (2009). The HEXACO–60: A short measure of the major dimensions of personality. *Journal of personality assessment*, 91(4), 340–345. doi: 10.1080/00223890902935878
- (3) Back, M. D., Küfner, A. C., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology*, 105(6), 1013–1037. <http://dx.doi.org/10.1037/a0034431>
- (4) Barry, C. T., Frick, P. J., Adler, K. K., & Grafeman, S. J. (2007). The predictive utility of Narcissism among children and adolescents: Evidence for a distinction between Adaptive and Maladaptive Narcissism. *Journal of Child and Family Studies*, 16(4), 508–521. doi: 10.1007/s10826-006-9102-5
- (5) Barry, C. T., Pickard, J. D., & Ansel, L. L. (2009). The associations of adolescent invulnerability and narcissism with problem behaviors. *Personality and Individual Differences*, 47(6), 577–582. doi: 10.1016/j.paid.2009.05.022
- (6) Barry, C. T., & Wallace, M. T. (2010). Current considerations in the assessment of youth narcissism: Indicators of pathological and normative development. *Journal of Psychopathology and Behavioral Assessment*, 32(4), 479–489. doi: 10.1007/s10862-010-9188-3
- (7) Book, A., Visser, B. A., & Volk, A. A. (2015). Unpacking "evil": Claiming the core of the Dark Triad. *Personality and Individual Differences*, 73, 29–38. doi: 10.1016/j.paid.2014.09.016
- (8) Campbell, W. K., & Foster, C. A. (2002). Narcissism and commitment in romantic relationships: An investment model analysis. *Personality and Social Psychology Bulletin*, 28(4), 484–495. doi: 10.1177/0146167202287006
- (9) Campbell, W. K., & Miller, J. D. (2011). *The handbook of narcissism and narcissistic personality disorders: Theoretical approaches, empirical findings and treatments*. Hoboken, New Jersey: Wiley & Sons.
- (10) Chabrol, H., Van Leeuwen, N., Rodgers, R., & Séjourné, N. (2009). Contributions of psychopathic, narcissistic, Machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*, 47(7), 734–739. doi: 10.1016/j.paid.2009.06.020
- (11) Chabrol, H., Melioli, T., Van Leeuwen, N., Rodgers, R., & Goutaudier, N. (2015). The Dark Tetrad: Identifying personality profiles in high-school students. *Personality and Individual Differences*, 83, 97–101. doi: 10.1016/j.paid.2015.03.051
- (12) Christie, R. C., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York, NY: Academic press.
- (13) Clarke, I. E., Karlov, L., & Neale, N. J. (2015). The many faces of narcissism: Narcissism factors and their predictive utility. *Personality and Individual Differences*, 81, 90–95. doi: 10.1016/j.paid.2014.11.021
- (14) Del Giudice, M., & Belsky, J. (2011). The development of life history strategies: Toward a multi-stage theory. In D. M. Buss & P. H. Hawley (Eds.), *The evolution of personality and individual differences* (pp. 154–176). Oxford: Oxford University Press.

- (15) De Vries, R. E., De Vries, A., De Hoogh, A., & Feij, J. (2009). More than the Big Five: Egoism and the HEXACO model of personality. *European Journal of Personality*, 23(8), 635-654. doi: 10.1002/per.733
- (16) De Vries, R. E., & Kampen, D. V. (2010). The HEXACO and 5DPT models of personality: a comparison and their relationships with psychopathy, egoism, pretentiousness, immorality, and Machiavellianism. *Journal of Personality Disorders*, 24(2), 244–257.
- (17) Douglas, K. S., Guy, L. S., & Hart, S. D. (2009). Psychosis as a risk factor for violence to others: a meta-analysis. *Psychological bulletin*, 135(5), 679-706. <http://dx.doi.org/10.1037/a0016311>
- (18) Dunkel, C. S., Mathes, E., & Beaver, K. M. (2013). Life history theory and the general theory of crime: Life expectancy effects on low self-control and criminal intent. *Journal of Social, Evolutionary, and Cultural Psychology*, 7(1), 12-23. <http://dx.doi.org/10.1037/h0099177>
- (19) Foster, J. D., Shrira, L., & Campbell, W. K. (2006). Theoretical models of narcissism, sexuality, and relationship commitment. *Journal of Social and Personal Relationships*, 23(3), 367-386. doi: 10.1177/0265407506064204
- (20) Furnham, A., Richards, S., Rangel, L., & Jones, D. N. (2014). Measuring malevolence: Quantitative issues surrounding the Dark Triad of personality. *Personality and individual differences*, 67, 114-121. doi: 10.1016/j.paid.2014.02.001
- (21) Gentile, B., Miller, J. D., Hoffman, B. J., Reidy, D. E., Zeichner, A., & Campbell, W. K. (2013). A test of two brief measures of grandiose narcissism: The Narcissistic Personality Inventory–13 and the Narcissistic Personality Inventory–16. *Psychological assessment*, 25(4), 1120. <http://dx.doi.org/10.1037/a0033192>
- (22) Grant, B. F., Chou, S. P., Goldstein, R. B., Huang, B., Stinson, F. S., Saha, T. D., ... & Ruan, W. J. (2008). Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder: results from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions. *The Journal of clinical psychiatry*, 69(4), 533-545.
- (23) Goulding, A., & Ódéhán, N. (2009). Schizotypy and mental health in the general population: A pilot study. *Personality and Mental Health*, 3(3), 193-202. doi: 10.1002/pmh.86
- (24) Hare, R. D. (2003). *The Hare Psychopathy Checklist—Revised, 2nd edition*. Toronto, ON, Canada: Multi-Health Systems.
- (25) Hare, R. D., & Neumann, C. S. (2009). Psychopathy and its measurement. In P. J. Corr & G. Matthews (Eds): *Cambridge handbook of personality psychology* (pp. 660-686). Cambridge: Cambridge University Press.
- (26) Hill, P. L., & Lapsley, D. K. (2011). Adaptive and maladaptive narcissism in adolescent development. In C. T. Barry, P. K. Kerig, K. K. Stellwagen, & T. D. Barry (Eds.), *Narcissism and Machiavellianism in youth: implications for the development of adaptive and maladaptive behavior* (pp. 89–105). Washington, DC: American Psychological Association.
- (27) Holtzman, N. S., & Strube, M. J. (2010). Narcissism and attractiveness. *Journal of Research in Personality*, 44(1), 133-136. doi: 10.1016/j.jrp.2009.10.004
- (28) Houlcroft, L., Bore, M., & Munro, D. (2012). Three faces of Narcissism. *Personality and individual differences*, 53(3), 274-278. doi: 10.1016/j.paid.2012.03.036
- (29) Jonason, P. K., & Kroll, C. H. (2015). A multidimensional view of the relationship between empathy and the dark triad. *Journal of Individual Differences*, 36(3), 150-156. doi: 10.1027/1614-0001/a000166
- (30) Jonason, P. K., Li, P. C. N., & Czarna, A. (2013). Quick and dirty: Some psychosocial costs associated with the Dark Triad in three countries. *Evolutionary Psychology*, 11(1), 172-185. http://ink.library.smu.edu.sg/soss_research/1468

- (31) Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2009). The dark triad: Facilitating a short-term mating strategy in men. *European Journal of Personality*, 23(1), 5-18. doi: 10.1002/per.698
- (32) Jonason, P. K., & McCain, J. (2012). Using the HEXACO model to test the validity of the Dirty Dozen measure of the Dark Triad. *Personality and Individual Differences*, 53(7), 935-938. doi: 10.1016/j.paid.2012.07.010
- (33) Jonason, P. K., Webster, G. D., Schmitt, D. P., Li, N. P., & Crysel, L. (2012). The antihero in popular culture: Life history theory and the dark triad personality traits. *Review of General Psychology*, 16(2), 192-199. <http://dx.doi.org/10.1037/a0027914>
- (34) Jones, S. E., Miller, J. D., & Lynam, D. R. (2011). Personality, antisocial behavior, and aggression: A meta-analytic review. *Journal of Criminal Justice*, 39(4), 329-337. doi: 10.1016/j.jcrimjus.2011.03.004
- (35) Jones, D. N., & Olderbak, S. G. (2014). The associations among dark personalities and sexual tactics across different scenarios. *Journal of interpersonal violence*, 29(6), 1050-1070. doi: 10.1177/0886260513506053
- (36) Jones, D. N., & Paulhus, D. L. (2009). Machiavellianism. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 93-108). New York, NY: Guilford.
- (37) Jones, D. N., & Paulhus, D. L. (2014). Introducing the Short Dark Triad (SD3): A brief measure of Dark personality traits. *Assessment*, 21(1), 28-41. doi: 10.1177/1073191113514105
- (38) Kauten, R. L., & Barry, C. T. (2016). Adolescent narcissism and its association with different indices of prosocial behavior. *Journal of Research in Personality*, 60, 36-45. doi: 10.1016/j.jrp.2015.11.004
- (39) Knežević, G., Radović, B., & Peruničić, I. (2008). Can Amoralism be measured? *14th European Conference on Personality, Tartu, Estonia, July 16-20, 2008, Book of Abstracts*, p. 137.
- (40) Kujačić, D., Međedović, J., & Knežević, G. (2015). The relations between personality traits and psychopathy as measured by ratings and self-report. *Psihologija*, 48(1), 45-59. doi: 10.2298/PSI1501045K
- (41) Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research*, 39(2), 329-358. doi: 10.1207/s15327906mbr3902_8
- (42) Lee, K., & Ashton, M. C. (2005). Psychopathy, Machiavellianism, and narcissism in the Five-Factor Model and the HEXACO model of personality structure. *Personality and Individual Differences*, 38(7), 1571-1582. doi: 10.1016/j.paid.2004.09.016
- (43) Lee, K., Ashton, M. C., Wiltshire, J., Bourdage, J. S., Visser, B. A., & Gallucci, A. (2013). Sex, power, and money: Prediction from the Dark Triad and Honesty-Humility. *European Journal of Personality*, 27(2), 169-184. doi: 10.1002/per.1860
- (44) McDonald, M. M., Donnellan, M. B., & Navarrete, C. D. (2012). A life history approach to understanding the Dark Triad. *Personality and Individual Differences*, 52(5), 601-605. doi: 10.1016/j.paid.2011.12.003
- (45) Međedović, J. (2012). Topography of dishonesty: Mapping the opposite pole of Honesty-Humility personality domain. *Primenjena psihologija*, 5(2), 115-135.
- (46) Međedović, J. (2015). *Nomološka mreža psihopatije [Nomological network of psychopathy]*. Institut za kriminološka i sociološka istraživanja: Beograd.
- (47) Međedović, J. & Petrović, B. (in press). Dark Tetrad: Structural properties and location in the personality space. *Journal of Individual Differences*. doi: 10.1027/1614-0001/a000179.
- (48) Miller, J. D., Gaughan, E. T., Pryor, L. R., Kamen, C., & Campbell, W. K. (2009). Is research using the narcissistic personality inventory relevant for understanding

- narcissistic personality disorder? *Journal of Research in Personality*, 43(3), 482-488. doi: 10.1016/j.jrp.2009.02.001
- (49) Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Campbell, W. K. (2011). Grandiose and vulnerable narcissism: A nomological network analysis. *Journal of personality*, 79(5), 1013-1042. doi: 10.1111/j.1467-6494.2010.00711.x
- (50) Montag, C., Hall, J., Plieger, T., Felten, A., Markett, S., Melchers, M., & Reuter, M. (2015). The DRD3 Ser9Gly polymorphism, Machiavellianism, and its link to schizotypal personality. *Journal of Neuroscience, Psychology, and Economics*, 8(1), 48-57. <http://dx.doi.org/10.1037/npe0000034>
- (51) Mouilso, E. R., & Calhoun, K. S. (2012). A mediation model of the role of sociosexuality in the associations between narcissism, psychopathy, and sexual aggression. *Psychology of Violence*, 2(1), 16-27. <http://dx.doi.org/10.1037/a0026217>
- (52) O'Meara, A., Davies, J., & Hammond, S. (2011). The psychometric properties and utility of the Short Sadistic Impulse Scale (SSIS). *Psychological assessment*, 23(2), 523-531. <http://dx.doi.org/10.1037>
- (53) Pailing, A., Boon, J., & Egan, V. (2014). Personality, the Dark Triad and violence. *Personality and individual differences*, 67, 81-86. doi: 10.1016/j.paid.2013.11.018
- (54) Paulhus, D. L. (2001). Normal narcissism: Two minimalist accounts. *Psychological Inquiry*, 12(4), 228–230. <http://www.jstor.org/stable/1449480>
- (55) Paulhus, D. L. (2014). Toward a taxonomy of dark personalities. *Current Directions in Psychological Science*, 23(6), 421-426. doi: 10.1177/0963721414547737
- (56) Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of research in personality*, 36(6), 556-563. doi: 10.1016/S0092-6566(02)00505-6
- (57) Paulhus, D. L., & Jones, D. N. (2015). Measures of dark personalities. In G. J. Boyle, D. H. Saklofske, & G. Matthews (Eds.), *Measures of personality and social psychological constructs* (pp. 562-594). San Diego: Academic Press.
- (58) Paulhus, D. L., Neumann, C. S., & Hare, R.D. (in press). *Manual for the Self-report Psychopathy scale*. Toronto: Multi-Health Systems.
- (59) Ragsdale, K. A., Mitchell, J. C., Cassisi, J. E., & Bedwell, J. S. (2013). Comorbidity of schizotypy and psychopathy: Skin conductance to affective pictures. *Psychiatry research*, 210(3), 1000-1007. doi: 10.1016/j.psychres.2013.07.027
- (60) Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of personality and social psychology*, 54(5), 890-902. <http://dx.doi.org/10.1037/0022-3514.54.5.890>
- (61) Rauthmann, J. F., & Kolar, G. P. (2012). How "dark" are the Dark Triad traits? Examining the perceived darkness of narcissism, Machiavellianism, and psychopathy. *Personality and Individual Differences*, 53(7), 884-889. doi: 10.1016/j.paid.2012.06.020
- (62) Reznick, D., Bryant, M. J., & Bashey, F. (2002). r- and K-selection revisited: The role of population regulation in Life-History evolution. *Ecology*, 83(6), 1509-1520. [http://dx.doi.org/10.1890/0012-9658\(2002\)083\[1509:RAKSRT\]2.0.CO;2](http://dx.doi.org/10.1890/0012-9658(2002)083[1509:RAKSRT]2.0.CO;2)
- (63) Ronningstam, E. (2005). *Identifying and understanding the narcissistic personality*. New York: Oxford University Press.
- (64) Russ, E., Shedler, J., Bradley, R., & Westen, D. (2008). Refining the construct of Narcissistic Personality Disorder: Diagnostic criteria and subtypes. *The American Journal of Psychiatry*, 165(11), 1473–1481. <http://dx.doi.org/10.1176/appi.ajp.2008.07030376>
- (65) Samuel, D. B., & Widiger, T. A. (2008). Convergence of narcissism measures from the perspective of general personality functioning. *Assessment*, 15(3), 364-374. doi: 10.1177/1073191108314278

- (66) Seah, S. L., & Ang, R. P. (2008). Differential correlates of reactive and proactive aggression in Asian adolescents: Relations to narcissism, anxiety, schizotypal traits, and peer relations. *Aggressive Behavior*, 34(5), 553-562. doi: 10.1002/ab.20269
- (67) Sherman, R. A., Figueredo, A. J., & Funder, D. C. (2013). The behavioral correlates of overall and distinctive life history strategy. *Journal of Personality and Social Psychology*, 105(5), 873-888. <http://dx.doi.org/10.1037/a0033772>
- (68) Snowden, R. J., & Gray, N. S. (2011). Impulsivity and psychopathy: Associations between the Barrett Impulsivity Scale and the Psychopathy Checklist revised. *Psychiatry Research*, 187(3), 414-417. doi: 10.1016/j.psychres.2011.02.003
- (69) Vazire, S., & Funder, D. C. (2006). Impulsivity and the self-defeating behavior of narcissists. *Personality and Social Psychology Review*, 10(2), 154-165. doi: 10.1207/s15327957pspr1002_4
- (70) Van Os, J., Linscott, R. J., Myin-Germeys, I., Delespaul, P., & Krabbendam, L. (2009). A systematic review and meta-analysis of the psychosis continuum: evidence for a psychosis proneness-persistence-impairment model of psychotic disorder. *Psychological medicine*, 39(2), 179-195. <http://dx.doi.org/10.1017/S0033291708003814>
- (71) Wai, M., & Tiliopoulos, N. (2012). The affective and cognitive empathic nature of the dark triad of personality. *Personality and Individual Differences*, 52(7), 794-799. doi: 10.1016/j.paid.2012.01.008
- (72) Witt, E. A., Donnellan, M. B., & Blonigen, D. M. (2009). Using existing self-report inventories to measure the psychopathic personality traits of fearless dominance and impulsive antisociality. *Journal of Research in Personality*, 43(6), 1006-1016. doi: 10.1016/j.jrp.2009.06.010
- (73) Wright, A. G., Pincus, A. L., Thomas, K. M., Hopwood, C. J., Markon, K. E., & Krueger, R. F. (2013). Conceptions of Narcissism and the DSM-5 Pathological Personality Traits. *Assessment*, 20(3), 339-352. doi: 10.1177/1073191113486692

LIČNOST I BIHEJVIORALNE KARAKTERISTIKE MRAČNOG I SVETLOG NARCIZMA

Narcizam je jedna od tzv. "mračnih" crta ličnosti koje se obično povezuju sa amoralnim i antisocijalnim ponašanjem. Međutim, za razliku od ostalih mračnih crta, neki aspekti narcizma su povezani sa socijalno prihvatljivim oblicima ljudskog ponašanja. Mračni i svetli aspekti narcizma identifikovani su parcijalizacijom varijanse narcizma za varijansu psihopatije, Makijavelizma i sadizma. Rezultati su pokazali da se mračni i svetli narcizam razlikuju u pogledu njihovog odnosa sa HEXACO crtama ličnosti (studija 1), antisocijalnim ponašanjem, šizotipijom i nesputanom socio-seksualnošću (studija 3). Rezultati studije 1 replikovani su na klasterima pojedinaca koji se razlikuju po izraženosti mračnog i svetlog narcizma (studija 2).

Rezultati pokazuju da se narcizam sastoji od dva aspekta, jednog koji je povezan sa amoralnim dispozicijama, i drugog koji odražava mnogo benigniju stranu ljudskog funkcionisanja.

KLJUČNE REČI: narcizam / mračne crte / ličnost / antisocijalno ponašanje / šizotipija / socioseksualnost

SUPPLEMENTARY MATERIAL 1

Items from the HEXACO-PI-R used for narcissism measurement in Study 3. The names of HEXACO domains and facets from which the items are taken are given in the parentheses. Items marked with * are reversely scored.

People sometimes tell me that I am too critical of others (Agreeableness; Gentleness).

I tend to be lenient in judging other people* (Agreeableness; Gentleness).

Even when people make a lot of mistakes, I rarely say anything negative* (Agreeableness; Gentleness).

I am usually quite flexible in my opinions when people disagree with me* (Agreeableness; Flexibility).

When people tell me that I'm wrong, my first reaction is to argue with them (Agreeableness; Flexibility).

I find it hard to compromise with people when I really think I'm right (Agreeableness; Flexibility).

I rarely feel anger, even when people treat me quite badly* (Agreeableness; Patience).

I rarely express my opinions in group meetings* (Extraversion; Sociability).

In social situations, I'm usually the one who makes the first move (Extraversion; Sociability).

When I'm in a group of people, I'm often the one who speaks on behalf of the group (Extraversion; Sociability).

I tend to feel quite self-conscious when speaking in front of a group of people* (Extraversion; Sociability).

If I knew that I could never get caught, I would be willing to steal a million dollars (Honesty; Fairness).

Having a lot of money is not especially important to me* (Honesty; Greed Avoidance).

I would like to live in a very expensive, high-class neighborhood (Honesty; Greed Avoidance).

I would like to be seen driving around in a very expensive car (Honesty; Greed Avoidance).

I would get a lot of pleasure from owning expensive luxury goods (Honesty; Greed Avoidance).

I am an ordinary person who is no better than others* (Honesty; Modesty).

I wouldn't want people to treat me as though I were superior to them* (Honesty; Modesty).

I think that I am entitled to more respect than the average person is (Honesty; Modesty).

I want people to know that I am an important person of high status (Honesty; Modesty).